

- Dr. Conell.* b) an electrical circuit configured to receive said at least one first signal generated by said inertia sensor and generate a second signal indicative of the number of said impulses.

Status of Claims

Prior to this amendment, claims 1-41 were pending in this application. This Amendment cancels claims 30, 36 and 37, amends claims ,, adds new claims 42-67. After this amendment is entered, claims 1-67 are currently pending in this application.

REMARKS

Office Action Paragraphs 1-4

In the November 11, 2000, Office Action, the Examiner objected to the drawings under 37 CFR §1.83(a) as not showing every feature of the invention specified in the claims. More specifically, the Examiner asserted that the drawings lacked an audible display (claim 3), a compass display (claim 31), and an accelerometer (claims 25 and 27). Submitted herewith are proposed informal drawing corrections for consideration by the Examiner.

Office Action Paragraph 5

The Examiner rejected claims 1-13, 22-27, 31, 38 and 40-41 under 35 U.S.C. 112, second paragraph, as being indefinite. Within this group of claims, all dependant claims depend from claims 1, 22 or 27. Specifically, the Examiner asserted that the preambles of these claims were directed to firearm monitoring devices (the subcombination) while the claim bodies were directed to the firearm monitoring devices in combination with firearms (the combination). Applicant respectfully disagrees with he Examiner's assertion.

Each of the limitations found in the claim bodies are limitations of the firearm monitoring device, not of a combination or of a firearm. Claims 1, 22 and 27 respectively recite an inertia sensor, an inertia switch and an accelerometer "configured to generate at least one first signal in response to substantially each discharge of said firearm" and "an electrical circuit configured to ... generate a second signal indicative of the number of said firearm discharges...". Neither of

these references to “firearm” in any of these claims transforms the claims from being directed to the firearm monitoring device to being directed to the combination. Each limitation sets forth how the respective inertia sensors and electrical circuits are configured to respond to a discharge of the firearm and to the first signal, respectively. The preambles are entirely consistent with the claim bodies, and no amendment is necessary.

Office Action Paragraph 7

The Examiner rejected claims 29 and 34 under 35 U.S.C. 102(b) as being anticipated by Johnson ‘704. In the Office Action, in support of the rejection, the Examiner listed certain claim limitations and associated them with elements and descriptions found in Johnson ‘704.

However, Johnson ‘704 does not meet all of the limitations asserted by the Examiner. In particular, absent from Johnson ‘704 is at least the limitation that the electrical circuit is configured to ignore any signals generated by said inertia sensor within a predetermined time period following the generation of an initial one of a series of said first signals.

The Examiner referenced column 4, lines 20-28 as meeting the limitation “disregard signals after a predetermined time”. However, limitation (d) as listed by the Examiner in paragraph 7 is not a limitation of claim 29 or 34. The limitation recited in these claims is as set forth in the preceding paragraph: “ignore any signals generated ... *within* a predetermined time...” (italics added), not ignore signals *after* a predetermined time. The passage in Johnson ‘704 cited by the Examiner appears to support what the Examiner indicates (“disregard signals after a predetermined time”), but that is not what is claimed in claims 29 and 34. This passage of Johnson ‘704 describes an “automatic switch on/switch off arrangement” to avoid unnecessary battery drain. As understood, when not in use, the Johnson ‘704 circuit disconnects certain parts from the battery. Upon generation of a signal by transducer 34, the “‘disconnected’ parts” are energized by the battery, remaining so for a period of time following the signal. While on, the Johnson ‘704 circuit appears to count every signal from transducer 34. Applicant notes that it does not appear (but is not clear) that the Johnson ‘704 circuit fails to count any of the signals from transducer 34.

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Since Johnson '704 fails to meet every limitation found in claim 29 and 34, this rejection must be withdrawn.

Office Action Paragraph 8

The Examiner rejected claims 28 and 32 under 35 U.S.C. 102(b) as being anticipated by Matthews. In the Office Action, in support of the rejection, the Examiner listed certain claim limitations and associated them with elements and descriptions found in Matthews.

By this amendment, claim 28 has been amended to recite specifically an inertia switch. The Matthews patent discloses the use of piezoelectric material, not the use of a switch. Matthews teaches the use of a sensor which generates an analog electrical potential which varies with the force of the impulse. Matthews teaches that the proportional electrical potential indicates the vigorousness of the exercise being conducted, which cannot be determined through the use of an inertia switch.

Additionally, Applicant has added claim 67, directed to another distinction over Matthews. Claim 67 includes the limitation that the signal generated by the inertia sensor is the result of the mass moving in opposition to the resilient bias. In contrast, the sensor disclosed in Matthews generates its signal as a result of the mass moving in the same direction as the resilient bias (provided by spring 142), stressing the piezoelectric material 122 thereby generating the electrical potential proportional to the force.

Since Matthews fails to meet every limitation found in claim 28 and 32, this rejection must be withdrawn.

Office Action Paragraph 9

The Examiner rejected claims 1-2, 4-6, 14-15, 18, 21, 28 and 32-33 under 35 U.S.C. 102(b) as being anticipated by Johnson et al '961. In the Office Action, in support of the rejection, the Examiner listed certain claim limitations and associated them with elements and descriptions found in Matthews.

In making this rejection, the Examiner has overlooked limitations found in each of these claims. First, all claims require an inertia sensor. The Examiner asserts that elements 36, 38, 50, 52 and 28 meet this requirement. However, as Johnston et al '961 indicates, element 28 is a switch which comprises the weapon's firing mechanism. (Col. 2, lines 53-55) Johnston et al '961 has no suggestion that the guns firing mechanism is an inertia sensor. Similarly, elements 36, 38 are not inertia sensors. Element 36 is a magnetic rod, which is attached to a reciprocating part of the weapon. Again, the reciprocating part of the weapon is not an inertia sensor. Finally, elements 50, 52 are not inertia sensors. Element 50 is a piezoelectric force transducer which generates an electrical potential due to a "buffer impact, feed cam or other component displacement". There is nothing in Johnston et al '961 that indicates these elements which deliver force to the piezoelectric force transducer are inertia driven. From the descriptions, Applicant believes that their movement results from the mechanical motion of the firing mechanism. Element 52 is described as an arrow, representing the delivery of force to the piezoelectric force transducer.

In addition to failing to meet the inertia limitation of these rejected claims, the Examiner has ignored each claims' limitation that the inertia sensor comprises "a moveable mass resiliently biased in a direction substantially opposite" the direction of the firearm recoil. Nowhere in Johnston et al '961 is any teaching or suggestion that switch 38, magnetic rod 36, reciprocating part 38, piezoelectric force transducer 50 or arrow 52 are resiliently biased at all, or resiliently biased in a direction opposite the direction of recoil. Applicant asserts that resiliently biasing any of these components would prevent them from operating in the intended manner disclosed in Johnston et al '961.

Since Johnston et al '961 fails to teach each and every element of these rejected claims, the rejection must be withdrawn.

Office Action Paragraph 11

The Examiner rejected claim 13 under 35 U.S.C. 103(a) as being unpatentable over Johnston et al '961 in view of Matthews.

Claim 13 does not claim a spring for returning an inertia switch. Claim 13, as claim 1 from which claim 13 depends, includes the limitation that the inertia sensor comprises “a moveable mass resiliently biased in a direction substantially opposite” the direction of the firearm recoil.

As discussed above, neither Johnston et al ‘961 nor Matthews alone teach or disclose the claim limitations as asserted by the Examiner in the previous paragraphs of the Office Action. When combined, the proposed combination fails to disclose the claim limitations of claim 13.

The Examiner asserts that it would have been obvious to apply the teachings of Matthews to the Johnston et al ‘961 device, resulting in a device with a particular means (spring) for returning the inertia switch. However, since Johnston et al ‘961 lacks an inertia sensor and inertia switch, it is unclear how the Matthews’ spring is to be incorporated into the Johnston et al ‘961 device.

The Examiner asserts that “Matthews teaches a spring for returning the inertia switch”. However, this nomenclature is not understandable. Presumably, the Examiner is asserting that Matthews teaches a spring for returning the weight 136, not the entire spring. Matthews, however, teaches that the weight 136 is resiliently biased in both directions, presumably for dampening (see col. 5, line 34, with detector 44 corresponding to pace detector 134).

The Examiner suggests the use of the Matthews spring with any of those elements of Johnston et al ‘961 which the Examiner described as a inertia sensor, elements 36, 38, 50, 52 and 28. However, as described above, none of these components are inertia sensors, none of these components comprises a moveable mass, and no resilient bias in any direction is disclosed.

To incorporate the Matthews spring into the Johnston et al ‘961 device, a person of ordinary skill in the art must figure out where to put it. There is no guidance in Johnson et al ‘961 as to where to put this spring. Element 28 is a switch which comprises the weapon’s firing mechanism. Does the spring go between the firing mechanism and the switch? Does it go between the firing mechanism and the weapon? How is it oriented?

Similarly, element 36 is a magnetic rod which is attached to a reciprocating part of the weapon. Does the spring go between the rod and the reciprocating part of the weapon? Such a configuration would render the Johnston et al ‘961 device inoperative. It appears to Applicant

that, for proper operation, there must be a solid connection between the magnetic rod and the reciprocating part of the weapon, as well as between the reciprocation part of the weapon and the rest of the weapon. Otherwise, the magnetic rod would be free to move even though the weapon had not discharged. Additionally, the lack of a solid connection would introduce lost motion and a time delay, and possibly never even generate a signal upon discharge.

Finally, element 50 is a piezoelectric force transducer and element 52 is an arrow. Is the Matthews spring to be added to support element 50? If so, the force delivered to element 50 would be reduced since element 50 would be free to move. Is the Matthews spring to be placed between element 50 and the "buffer impact, feed cam or other component displacement"? Is so, the force transmitted would be significantly reduced.

Thus, in making the combination offered by the Examiner, far more is required than just adding the Matthews spring to the Johnston et al '961 device is required. The person of ordinary skill in the art must come up with an inertia sensor, must come up with a moveable mass, and must decide to resiliently bias the mass in a direction opposite the direction of the recoil. The Examiner has not supplied a reference for these missing elements to guide the person of ordinary skill in the art in making the Examiner's asserted combination.

The proposed combination is not disclosed, taught or suggested by the prior art relied upon by the Examiner. Thus, the rejection of claim 13 under 35 U.S.C. § 103(a) is improper and must be withdrawn.

Office Action Paragraph 12

The Examiner has rejected claims 27, 30, 36, 37 and 41 under 35 U.S.C. 103(a) as being unpatentable over Johnson et al '961 in view of Haug. Claims 30, 36 and 37 have been cancelled. In making this rejection, the Examiner has overlooked limitations found in each of these claims.

Claim 27 includes the limitations that the electrical circuit determine that the firearm has been discharged based solely on receipt of the first signal and generate a second signal indicative of the number of firearm discharges in response only to the first signal.

The combination proposed by the Examiner fails to meet these limitations. In paragraph 9, the Examiner identified electrochemical meter 10 of Johnston et al '961 as meeting the "signal indicative of number of pulses" limitation. As disclosed in Johnston et al '961, the gap 20 migrates in proportion to current and time. The more current, the more the gap moves. In the Johnson device, the generation of current is confined to the discharge of the weapon, as the weapon's firing mechanism is used as switch 28, the magnetic rod 36 is attached to a reciprocating part of the weapon (presumably which moves only upon discharge), and piezoelectric force transducer 50 is impacted by a force due to buffer impact, feed cam or other component displacement (again, presumably which occurs upon discharge).

However, in the combination proposed by the Examiner, the use of an accelerometer will introduce error into the Johnston et al '961 device. Typically, an accelerometer generates an electrical potential proportional to the acceleration seen by the accelerometer. If an accelerometer is attached to the Johnston et al '961 weapon (in a manner not disclosed by either reference or described by the Examiner), the electrical potential delivered to meter 10 will vary with acceleration. Different size charges will result in different electrical potentials. Even handling of the weapon that generates acceleration of the weapon without discharge will produce electrical potentials.

Without a constant electrical potential being produced as a result only of each discharge of the weapon, the migration of gap 20 will not indicate the number of discharges. Instead, its position will be the result of the size of acceleration seen by the accelerometer, which, as mentioned above, will vary with the charge as well as occur even without a discharge.

Thus, the combination proposed by the Examiner fails to meet the limitations of the rejected claims, and the rejection under 35 U.S.C. § 103(a) is improper and must be withdrawn.

Office Action Paragraph 13

The Examiner rejected claims 1-2, 4-24, 26, 28-29, 32-35 and 38-40 under 35 U.S.C. 102(b) as being anticipated by Horne et al '307. In the Office Action, in support of the rejection, the Examiner listed certain claim limitations and associated them with elements and descriptions found in Horne.

In making this rejection, the Examiner has overlooked limitations found in each of these claims which are absent from Horne. First, all of these rejected claims require an inertia sensor or inertia switch. Horne does not disclose, or suggest an inertia sensor or inertia switch. The Examiner identified elements 28, 28b and 32 as an inertia sensor. These elements are not an inertia sensor. Element 28 is a plunger, element 28b is a detent in the plunger and element 32 is a spring. Together, these elements do not sense or actuate based on inertia: They are actuated by direct mechanical linkage to the firearm slide. According to Horne,

“[a]s the slide 20 moves rearwardly, it engages the actuator cam 14g and depresses it downwardly, causing the actuator hinge 14f to be depressed downwardly as well. Downward depression of the actuator hinge 14f in turn causes the hinge 14f to drive the plunger 28 forward within the bore 14d. Forward motion of the plunger in the bore 14d causes the detent 28b of the plunger 28 to displace a plunger of a slide switch 34...”. Column 4, lines 45-52.

Thus, Horne does not disclose an inertia sensor.

Additionally, Horne lacks a moveable mass resiliently biased in a direction substantially opposite a first direction (the direction of recoil). Claims 1, 2, 4-21, 24, 28, 32, 33, 38 and 39 all incorporate this limitation. In addition to the plunger 28 not being part of an inertia sensor or switch, the plunger 28 is biased by the spring 32 in the direction of recoil.

Furthermore, Horne lacks an electrical circuit which ignores “any signals generated by the inertia sensor or the inertia switch within a predetermined time period following the generation of an initial one of a series of first signals”. The passage of the Horne written description referenced by the Examiner does not disclose this feature. That passage, column 5, lines 44-62, describes the frequency of the microprocessor 50, but does not disclose that subsequent signals from the switch 34 (which, as discussed above, is not an inertia sensor or switch) are ignored. Since switch 34 is actuated mechanically by the linkage disclosed by Horne, false signals would not seem to be a problem. Furthermore, microprocessor frequency, even if it were to inhibit recognition of a subsequent closure of switch, is not a time period that is tied to the initial one of a first signal.

Thus, the rejection of these claims based on Horne is improper and must be withdrawn.

Office Action Paragraph 14

The Examiner rejected claims 28, 30, 32 and 36 under 35 U.S.C. 102(b) as being anticipated by Thornton '491. In the Office Action, in support of the rejection, the Examiner listed certain claim limitations and associated them with elements and descriptions found in Thornton. As noted above, claim 30 and 36 have been cancelled.

In making this rejection, the Examiner has overlooked limitations found in each of these claims which are absent from Thornton. For example, claims 28 and 32 recite that the inertia switch comprises a moveable mass resiliently biased in a direction substantially opposite a first direction. Thornton lacks any disclosure, teaching or suggestion of such a structure.

Thus, the rejection of these claims based on Thornton is improper and must be withdrawn.

Office Action Paragraph 15

The Examiner has rejected claims 1-41 under 35 U.S.C. § 251 as being "an improper recapture of claimed subject matter because the claim language is directed to subject matter surrendered in the original application by changes made to the claims in an effort to overcome a prior art rejection and/or arguments made in an effort to overcome the prior art". In support of this rejection, the Examiner relies specifically on the following claim language which was added by amendment during prosecution of the original patent:

1. "for attaching to a firearm, said firearm having a firing end and a grip end, and", added to the preamble of issued claim 1 (original application claim 1).
2. "wherein said first means comprise an inertia switch comprising a movable mass; and wherein said mass is resiliently biased toward the firing end of the firearm" added to issued claims 1 and 14 (original application claims 1 and 12).

The Examiner also relies upon "arguments filed on 2/20/96 directed to 'the moveable mass is resiliently biased toward the firing end of the firearm'".

Applicant respectfully traverses this rejection, as it is not supported by the proper application of the recapture rule. In making this rejection, the Examiner has essentially held that any broadening of the claims in any aspect beyond the scope of the issued claims constitutes impermissible recapture. However, this is not the recapture rule.

“The recapture rule ... prevents a patentee from regaining through reissue the subject matter that he surrendered in an effort to obtain allowance of the original claims”. In re Clement, 131 F.3d 1464, 1468, 45 USPQ2d 1161, 1164 (Fed. Cir. 1997). Surrender requires not only that there be intent to give up the subject matter, but that the subject matter actually be given up. The recapture rule does not apply, for example, in a case where claims to a previously unclaimed embodiment or invention are included in a reissue application. See MPEP §1412.01 (“In most instances, however, the mere failure to claim a disclosed embodiment in the original patent (absent an explicit statement in the original patent specification of unsuitability of the embodiment) would **not** be grounds for prohibiting a claim to that embodiment in the reissue.” Emphasis in original)

The Federal Circuit has used several ways to determine whether the recapture rule applies in a given situation. “The first step in applying the recapture rule is to determine whether and in what ‘aspect’ the reissue claims are broader than the patent claims. ... The second step is to determine whether the broader aspects of the reissue claims relate to surrendered subject matter. To determine whether an applicant surrendered particular subject matter, we look to the prosecution history for arguments and changes to the claims made in an effort to overcome a prior art rejection.” In re Clement, 131 F.3d at 1468-69, 45 USPQ2d at 1164 (Fed. Cir. 1997). Although these steps involve consideration and comparison of individual claim limitations, it is the entire scope of the claim which must be considered in applying the recapture rule. (“The proper focus is on the *scope* of the claims, not on the individual *feature* or *element* purportedly given up during prosecution of the original application.” Ball Corporation v. The United States, 729 F.2d 1429, 1437, 221 USPQ 289, 295 (Fed. Cir. 1984) (italics in original)

Within this analytical framework, the Federal circuit has held that claims which are narrower in all aspects than the claims that constitute the surrendered subject matter are not barred by the recapture rule. Clement, 131 F.3d at 1470, 45 USPQ2d at 1165; Ball, 729 F.2d at 1438, 221 USPQ at 296 (“...there is widespread agreement that reissue claims that are narrower than the cancelled claims are allowable”); Hester Industries, Inc. v. Stein, Inc., 142 F.3d 1472, 1482, 46 USPQ2d 1641, 1649 (Fed. Cir. 1998). Such claims are subject to other possible rejections.

“Reissue claims that are broader in certain respects and narrower in other respects may avoid the effect of the recapture rule.” *Mentor Corporation v. Coloplast, Inc.*, 998 F.2d 992, 996, 27 USPQ2d 1521, 1525 (Fed. Cir. 1993). When reissue claims are broadened in respects related to surrendered subject matter, the claims (may avoid the recapture rule if the claims “were materially narrowed in other respects” in comparison to the surrendered scope.) *Hester*, 142 F.3d at 1482, 46 USPQ2d at 1649 citing *Clement*, 131 F.3d at 1470, 45 USPQ2d at 1165.

Subject Matter Surrendered In The Original Application

In analyzing whether the recapture rule applies, the determination of what subject matter was surrendered during the original prosecution underlies the analysis for all of the independent claims. This, Applicant first addresses the determination of the surrendered subject matter before applying the recapture rule analysis to each independent claim.

“Deliberately canceling or amending a claim in an effort to overcome a reference strongly suggests that the applicant admits that the scope of the claim before the cancellation or amendment is unpatentable, but it is not dispositive because other evidence in the prosecution history may indicated the contrary.” *Clement*, 131 F.3d at 1469, 45 USPQ2d at 1164. Thus, the Federal Circuit, in *Clement* as well as in *Seattle Box Company, Inc. v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 221 USPQ 568 (Fed. Cir. 1984), recognizes that the last amendment to a claim does not represent the scope of surrendered subject matter where the claim as so amended is allowed. Absent a rejection, the amendment may go further than required to overcome the prior art rejection, and incorporate unnecessary limitations.

For a claim amendment to constitute an admission that the scope of the claim was not patentable, and therefore surrendered, the claim must be rejected and amended again. Thus, it is not the last amended claim that represents surrendered subject matter, but the second to last amendment.

However, if an amended claim is rejected, but subsequently allowed without further amendment on the bases of arguments presented by the applicant, those arguments can surrender subject matter added by that amendment. (See *Hester*, where repeated arguments distinguished

and emphasized the importance of a never amended limitation continuously present in the claims since the application was filed, resulted in that limitation being surrendered subject matter.)

Only two independent claims were filed in the original patent, original application claims 1 and 12 (which became issued claim 14). Original application claims 1 and 12 differ from each other only in the preamble, in that claim 1 is directed to a firearm monitoring device and claim 12 is directed to the combination of a firearm with a monitoring device. The bodies of both original application claims are identical. Because of the similarity of these claims, Applicant will only specifically discuss original application claim 1.

1. A firearm monitoring device, said firearm being susceptible to recoil when discharged, comprising:

- a) first means for creating a first signal in response to substantially each recoil of said firearm; and
- b) second means for receiving each said first signal and generating a second signal indicative of the number of said first electrical signals received by said second means.

During the original prosecution, original application claims 1 and 12 were amended once, and became issued claims 1 and 14. Thus, original application claims 1 and 12 establishes the maximum subject matter which arguably was surrendered. (Since the reissue application claims are not barred by the recapture rule even if original application claim 1 represents the scope of surrendered subject matter, Applicant does not, at this time, address the question whether this scope was actually surrendered, reserving the right to raise and address that issue later. Subject to that reservation of rights, for purposes of this response, Applicant will treat original application claims 1 and 12 as representing the scope of surrendered subject matter.)

The scope of original application claim 1 is extremely broad, and therefore represents a very limited surrender of any subject matter. The two main limitations of original application claim 1 are the first and second means. Despite 35 U.S.C. §112, ¶6 indicating that a means plus function clause is “construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof”, the scope of what was surrendered was any means that could perform the recited functions, “because other evidence in the prosecution history ... indicate[s] the contrary”.

As stated above, surrender requires intent to give up the subject matter. The scope of what was surrendered is dependant on the Examiner's rejections of original application claims 1 and 12. The Examiner based his rejections of original application claims 1 and 12, under § 102 and § 103 on prior art which did not disclose means within the construction of means plus function clauses under § 112, ¶6. Instead, the Examiner interpreted the means plus function clauses as covering any means for performing those functions. It was in response to and in reliance on this scope of the means plus function clauses that original application claims 1 and 12 were amended. Thus, the scope of what was surrendered by amending claim 1 (and claim 12) was the combination of any means for creating a first signal in response to substantially each recoil of said firearm and any means for receiving each said first signal and generating a second signal indicative of the number of said first electrical signals received by said second means.

In accordance with the Federal Circuit's holdings, e.g., in Clements, Ball, Hester, and Mentor, claims in this reissue application are not barred by the recapture rule if they recite at least (a) a specific structure for creating a first signal, and (b) a specific structure for receiving the first signal and generating a second signal.

The Two Step Analysis

In this reissue application, the claim grouping is as follows: 1-13, 38; 14-21, 39; 22-26, 31, 40; 27, 41; 28, 32, 33; 29, 34, 35; 42-54; 55-62; 63-66; and 67. The preambles of the independent claims of these groups are directed to Group I-firearm monitor (reissue application claims 1, 22, 27, 42, and 63), Group II-a firearm in combination with a firearm monitor (reissue application claims 14 and 55), and Group III-a device for counting impulses (reissue application claims 28, 29 and 67). Applicant first addresses Groups I and II.

Comparison of the Group I and II reissue application claims to the issued claims

Issued claims 1 and 14 are the only independent claims of the issued patent. The difference between the two lie in that claim 1 is directed to "a firearm monitoring device", while claim 14 is directed to "a firearm in combination with a monitoring device". As seen below, the preambles of these claims are nearly the same while the bodies of these claims are identical:

Issued Claim 1	Issued Claim 14
A firearm monitoring device for attaching to a firearm,	A firearm in combination with a monitoring device,
said firearm having a firing end and a grip end, and said firearm being susceptible to recoil when discharged,	said firearm having a firing end and a grip end, and said firearm being susceptible to recoil when discharged,
Comprising:	said monitoring device comprising:
first means for creating a first signal in response to substantially each recoil of said firearm; and	first means for creating a first signal in response to substantially each recoil of said firearm; and
Second means for receiving each said first signal and generating a second signal indicative of the number of said first electrical signals received by said second means;	second means for receiving each said first signal and generating a second signal indicative of the number of said first electrical signals received by said second means;
Wherein said first means comprise an inertia switch comprising a movable mass; and	wherein said first means comprise an inertia switch comprising a movable mass; and
Wherein said mass is resiliently biased toward the firing end of the firearm.	wherein said mass is resiliently biased toward the firing end of the firearm.

Because of the substantial similarity in these two issued claims, Applicant will refer only to claim 1 for analysis and discussion.

The Examiner's recapture rule rejection specifically relied on amendments to the preambles of original application claims 1 and 12. The preambles of reissue application claims 1, 22, 27, 42, and 63 are identical, and the preambles of reissue application claims 14 and 55 are nearly the same. For ease of comparison purposes, since they all are essentially identical, Applicant will apply the two step recapture analysis by comparing these reissue preambles to the issued preambles separately from the comparison of the these reissue application claim bodies to the issued claim bodies, although it must be kept in mind that, as held by the Federal Circuit, "[t]he proper focus is on the *scope* of the claims, not on the individual *feature* or *element* purportedly given up during prosecution of the original application." Ball, 729 F.2d at 1437, 221 USPQ at 295 (*italics in original*).

Comparison of the preambles of Groups I and II to the preamble of issued claim 1

A comparison of the preamble of issued claim 1 preamble to the preamble of reissue

application claim 1 illustrates the differences between the preamble of issued claim 1 and the preambles of reissue application claims 1, 14, 22, 27, 42, 55 and 63:

Issued Claim 1 Preamble	Reissue Application Claim 1 Preamble
A firearm monitoring device	A firearm monitoring device
for attaching to a firearm,	for use with a firearm,
said firearm having a firing end and a grip end, and	
said firearm being susceptible to recoil when discharged,	said firearm being susceptible to recoil in a first direction when discharged,
Comprising	comprising

Regardless of whether the reissue application claims are broader in any aspects than the patent claims, the amendments of the preamble of issued claims 1 and 14 were not made to overcome a prior art rejection, and do not constitute surrendered matter.

In the Initial Office Action dated October 10, 1995, Examiner Wesson rejected original application claim 1 (and original application claims 2-11, dependant therefrom) under 35 U.S.C. § 112, second paragraph, as being indefinite for lacking antecedent basis for "said firearm" in the preamble. In response to this rejection, the preamble of original application claim 1 was amended to read:

1. A firearm monitoring device for attaching to a firearm, said firearm having a firing end and a grip end, and said firearm being susceptible to recoil when discharged, comprising

(underlining indicates additions)

and the preamble of original application claim 12 (which issued as issued claim 14) was amended to read:

12. A firearm in combination with a monitoring device, said firearm having a firing end and a grip end, and said firearm being susceptible to recoil when discharged, said monitoring device comprising:

In determining whether particular subject matter was surrendered, reference is made to the prosecution history for arguments, and changes to the claims made in an effort to overcome a prior art rejection. Clement, 131 F.3d at 1469, 45 USPQ2d at 1164 Neither of these amendments were made to overcome a prior art rejection nor constitute a claim limitation. A preamble is not accorded any patentable weight where it merely recites the intended use of a

structure. See MPEP §2111.02. Although “firearm monitoring” may be sufficient to “breathe life and meaning into the claim”, “firearm monitoring device” of original application claim 1 and “firearm in combination with a monitoring device” in original application claim 12 were not added to the claims to overcome a prior art rejection, but were present as originally filed.

The addition to issued claim 1 of “for attaching to a firearm” was not made to overcome a prior art rejection, but was made merely to provide antecedent basis for “said firearm” in the preamble as originally filed. See Response 2/20/96, p. 6. The other amendments made to the preambles of original application claims 1 and 12 recite that the firearm has a firing end and a grip end, but are not limitations to the claim and were not made to overcome a prior art rejection. The recitation of “firing end” only provides a reference direction for the recitation in the claim bodies of “toward the firing end of the firearm”. The recitation of “grip end” is unrelated to any limitation found in the claim bodies.

The preamble of reissue application claim 1 has been amended by deleting most of the language which was added to the preamble during the original prosecution of issued claim 1, *i.e.*, “attaching to” and “said firearm having a firing end and a grip end”. Similarly, the preamble of reissue application claim 14 has been amended in this reissue application by deleting “said firearm having a firing end and a grip end”. (The preambles of the other claims of Groups I and II also omit such language.) Since these now omitted limitations did not constitute limitations of the claims, the scope of the reissue application claims are not broader than the scope of the surrendered subject matter. However, these omissions clarify that “for attaching to” and “said firing end and a grip end” did not constitute limitations to the claims.

As mentioned above, this deleted language was not added to overcome a prior art rejection, and its deletion from claims 1 and 14 (and omission from the new claims) in this reissue application is not barred by the recapture rule. Additionally, the reference direction provided by “having a firing end” is now provided in the preamble by “susceptible to recoil in a first direction”. (As discussed below, commensurate with this revision, the direction of bias of the movable mass is recited in reference to the first direction.) The antecedent basis provided by the addition of “for attaching to a firearm” is provided by the amended language “for use with a fire arm”. Based solely on the language, “for use with” is broader than “for attaching to”, but

neither one constitutes a limitation (being a statement of intended use found in the preamble) and neither is limiting.

Thus, these changes to the preambles of reissue application claims 1 and 14, and omission from the preambles of reissue application claims 22, 27, 42, 53 and 63, do not represent limitations in the claim, nor recapture of claimed subject matter given up during the original prosecution.

Comparison of the claim bodies of Groups I and II to issued claim 1

In determining whether and in what aspects the bodies of the reissue application claims are broader than the patent claims, the reissue application claims must first be compared to the issued claims limitation by limitation, although as mentioned above, “[t]he proper focus is on the *scope* of the claims, not on the individual *feature* or *element* purportedly given up during prosecution of the original application.” Ball, 729 F.2d at 1437, 221 USPQ at 295. (italics in original) In regard to the individual limitations of the reissue application claims there are:

Issued Claim 1 Limitations	Reissue Application Claims Limitations	Broader Or Narrower
first means for creating a first signal in response to substantially each recoil of said firearm	Claims 1, 14, and 63: an inertia switch configured to generate at least one first signal in response to substantially each discharge of said firearm	Inertia switch is broader than first means for creating a first signal (applying §112, ¶6 construction)
	Claims 22, 42, and 55: an inertia sensor configured to generate at least one first signal in response to substantially each discharge of said firearm	Inertia sensor is broader than first means for creating a first signal (applying §112, ¶6 construction)
	Claim 27: an accelerometer configured to generate at least one first signal in response to substantially each discharge of said firearm	Accelerometer is broader than first means for creating a first signal (applying §112, ¶6 construction)
Second means for receiving each said first signal and generating a second signal indicative of the number of said first electrical signals received by said second means	All Claims: an electrical circuit configured to receive said at least one first signal generated by said inertia sensor and generate a second signal indicative of the number of said firearm discharges	An electrical circuit is broader than second means for receiving and generating (applying §112, ¶6 construction). Generation of a second signal indicative of the number of first signals received clarifies, but is not broader than generating a second signal indicative of the number of firearm discharges
	Claims 22, 27 and 63: said electrical circuit configured to ignore any signals generated by said inertia sensor within a predetermined time period following the generation of an initial one of a series of said first signals	An electrical circuit configured to ignore any signals generated within a predetermined time is broader than second means for receiving an generating
wherein said first means comprise an inertia switch comprising a movable mass; and wherein said mass is resiliently biased toward the firing end of the firearm	Claims 1, 14, and 63: said inertia switch comprising a moveable mass resiliently biased in a direction substantially opposite said first direction	Inertia sensor and biasing direction is of the same breadth. See above regarding first means
	Claims 42, and 55: said inertia sensor comprising a moveable mass resiliently biased in a direction substantially opposite said first direction	Inertia sensor is broader than inertia sensor, but biasing limitation is of the same breadth. See above regarding first means

None of reissue application claims of Groups I and II recites first means for creating a first signal. Instead claims 1, 14 and 63 recite an inertia switch, claims 22, 42 and 55 recite an inertia

sensor and claim 27 recites an accelerometer. The omission of the means plus function language in favor of specifically reciting an inertia sensor, inertia switch or accelerometer makes this aspect of these reissue application claims broader than the issued claims when the means plus function clause is construed under §112, 6th paragraph (contrary to Examiner Wasson's construction thereof during the original prosecution), and clarifies that these reissue application claims are not limited to being construed under §112, 6th paragraph as covering "the corresponding structure, material, or acts described in the specification and equivalents thereof" or limited to the range of equivalents under the doctrine of equivalents as applied to means plus function clauses. As indicated in the chart above, recitation of inertia sensor, inertia switch or accelerometer is broader than the recitation of means for creating a first signal.

"Sensor" as used in reissue application claims 22, 42 and 55 is broader than "switch" as used in reissue claims 1, 14, and 63, and issued claim 1.

As illustrated, each of reissue application claims 1, 14, 42 and 55 recite that the inertia sensor or inertia switch comprises a moveable mass resiliently biased in a "first" direction. The preambles of these reissue application claims define the first direction as being the direction of the recoil of the firearm, which is the opposite direction from the "firing end of the firearm". The direction of biasing in these claims remains the same as in the issued claims, relative to the direction of the force of the recoil. This limitation clarifies the direction of biasing, but is not broader.

None of reissue application claims 1, 14, 22, 27, 42, 55 and 63 recites second means for receiving and generating The omission of the means plus function language in favor of specifically reciting an electrical circuit configured to receive and generate makes this aspect of these reissue claims broader than the issued claims when the means plus function clause is construed under §112, 6th paragraph (contrary to Examiner Wasson's construction thereof during the original prosecution) and clarifies that these reissue application claims are not limited to being construed under §112, 6th paragraph as covering "the corresponding structure, material, or acts described in the specification and equivalents thereof" or limited to the range of equivalents under the doctrine of equivalents as applied to means plus function clauses.

Each of reissue application claims 1, 14, 42, 55 and 63 recites that the second signal generated by the electrical circuit is indicative of the number of firearm discharges. This provides clarification over the issued claims which recite that the second signal is indicative of the number of

first electrical signals (where the first signals are generated in response to recoil of the firearm which is tied in the issued claims to discharge).

Each of reissue application claims 22, 27 and 63 recite that the electrical circuit is configured to ignore any signals generated by said inertia sensor within a predetermined time period following the generation of an initial one of a series of said first signals. This limitation is broader.

Determination of whether broader aspects of the Group I and II reissue application claims relate to surrendered subject matter

None of the reissue application claims are broader than the surrendered subject matter, and thus the recapture rule does not apply. As stated above, in accordance with the Federal Circuit's holdings, claims in this reissue application are not barred by the recapture rule if they recite at least (a) a specific structure for creating a first signal, and (b) a specific structure for receiving the first signal and generating a second signal.

The recitation of an inertia sensor, an inertia switch or an accelerometer is of a specific structure for creating the first signal, and is narrower than the scope of subject matter surrendered.

The recitation of an electric circuit is a specific structure for receiving the first signal and generating a second signal, and is narrower than the scope of subject matter surrendered.

The recitation that the electrical circuit is configured to ignore any signals generated by said inertia sensor within a predetermined time period following the generation of an initial one of a series of said first signals is also narrower than the scope of subject matter surrendered.

Thus, the recapture rule does not apply to these reissue claims.

Applicant further notes that, even if the Examiner asserts that the scope of original application claim 1 as originally filed is narrower than Examiner Wesson interpreted it to be, through the application of §112, ¶6 to the means plus function clauses (which such assertion ignores the requirement that surrender be done knowingly with intent), the recapture rule does not bar the reissue application claims.

Regardless of whether the scope of the other limitations of reissue application claims 1, 14, 42 and 55 represent broadening in respects related to surrendered subject matter, these claims recite a movable mass biased in a direction substantially opposite a first direction. This limitation materially narrows these claims and falls squarely within the Federal Circuit's holdings. See Hester, 142 F.3d at 1482, 46 USPQ2d at 1649, Clement, 131 F.3d at 1470, 45 USPQ2d at 1165. Thus, regardless of the Examiner's analysis, the recapture rule does not apply to reissue application claims 1, 14, 42 and 55.

Claims 22, 27 and 63 are also materially narrower than original claim 1 as originally filed. These claims recite that the electrical circuit is configured to ignore any signals generated by said inertia sensor within a predetermined time period following the generation of an initial one of a series of said first signals. Claims 22, 27 and 63 are clearly outside the proper application of the recapture rule. Furthermore, these claims are directed to a particular embodiment of the invention was never pursued during the original prosecution and cannot constitute recapture surrendered subject matter. See MPEP §1412.01

Comparison of the Group III reissue application claims to the issued claims

Group III includes reissue application independent claims 28, 29 and 67. The preambles of these claims are identical, being directed to an impulse monitor. These claims are directed to a particular embodiment of the invention or different invention, which were never pursued during the original prosecution and cannot constitute recapture surrendered subject matter. See MPEP §1412.01

However, beyond the complete inapplicability of the recapture rule to embodiments and inventions never pursued, even if the Examiner improperly continues to apply the recapture rule, it is clear that these claims are materially narrower than the surrendered subject matter. Reissue application claims 28 and 67 include the limitation that the inertia switch/sensor includes a moveable mass biased in a direction opposite a first direction. This limitation is materially narrower than the scope of the surrendered subject matter. Reissue application claim 29 is also materially narrower than the scope of the surrendered subject matter. Reissue application claim 29 recites an electrical circuit configured to ignore any signals generated by said inertia sensor

within a predetermined time period following the generation of an initial one of a series of said first signals.

Claims 28, 29 and 67 are clearly outside the proper application of the recapture rule.

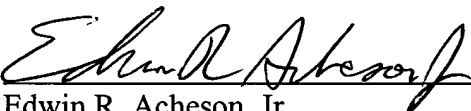
For these reasons, the rejection of all of the claims based on the recapture rule is improper and must be withdrawn.

Conclusion

Applicant believes that of the Examiner's rejections must be withdrawn and that all of the claims are in condition for allowance. Applicant respectfully requests that the Examiner withdraw the rejections and allow this application.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Box Non-Fee Amendment, The Assistant Commissioner for Patents, Washington, D.C., 20231, this 16th day of April, 2001.

